

MONITORING AND RESEARCH SUBCOMMITTEE GALVESTON BAY COUNCIL

**Meeting Minutes
Wednesday, March 10, 2021
9:30AM – 11:30AM**

Subcommittee Chair: George Guillen, Environmental Institute of Houston-University of Houston Clear Lake (EIH-UHCL)

Subcommittee Vice Chair: Mike Lee, United States Geological Society (USGS)

GBEP Representative: Kristen McGovern

Call to Order, Introductions (Via Microsoft Teams)

Attendees: Anna Armitage (TAMUG), Kimber De Salvo Anderson (TIRN), Ryan Bare (HARC), Charlotte Cisneros (GBF), Jim Dobberstine (Lee College), Bryan Eastham (TPWD), Lisa Gonzalez (HARC), George Guillen (EIH-UHCL), Erin Kinney (HARC), Michael Lee (USGS), Lindsey Lippert (GBEP), Hui Liu (TAMUG), Yina Liu (TAMU), Webster Mangham (TRA), Christopher Marshall (TAMUG), Lisa Marshall (GBEP), Kristen McGovern (GBEP), Hanadi Rifai (UH), Christian Rines (GBEP), Shane Simpson (SJRA), Jamie Steichen (TAMUG), Patricia Thompson (GBEP), Dave Wells (TAMUG), and Jean Wright (H-GAC).

Approval of December 9, 2020 meeting minutes – approved.

Project Updates:

- Nutrient and Sediment Monitoring of the San Jacinto River – USGS: The San Jacinto nutrient and sediment monitoring will be wrapping up soon. The gage is installed, and USGS has been collecting data for water quality, sediment and nutrients, and isotopic analysis. There is external funding to keep the gage running, so discharge will continue to be monitored at the gage site. The goal is to continue the nutrient and sediment monitoring through another contract so that eventually the real-time streamflow estimate will be available, as it is for the Trinity River. This project will be wrapping up soon.
- Intertidal Oyster Reef Mapping and Analysis – UH: The final report is being finalized and will be available on the GBEP website in the next couple of weeks.
- Lead Isotopes and Heavy Metal Concentrations in Galveston Bay Waters, Sediments, and Oysters – UH: The analyses are almost complete; there is a little more work to be done on the oyster heavy metal concentration

data. UH is starting to work on the final report; the PhD student on the project is getting ready to graduate in May.

- Characterizing PCBs and Dioxins in the Houston Ship Channel and Galveston Bay Post Harvey – UH: UH is in a holding pattern right now due to Covid-19; waiting for UH to give permission to go out in the field and collect more samples.
- Effect of Microplastics on the Base of Marine Food Webs – TAMUG: The QAPP has been approved and the kick-off meeting was held a couple of weeks ago. Chemical digestion of the fishes from the research collection is ongoing. TAMUG is waiting for the fish to come into the bays and will be collecting them around April-May to bring into the Sea Life facility to run the swimming trials.
- Galveston Bay Oyster Microplastics: Baselines and Impacts – TAMUG: The QAPP has been approved and the kick-off meeting was held a couple of weeks ago. Some supplies have been purchased, and TAMUG is getting ready to begin sampling.
- Regional Monitoring Database – HARC: The QAPP is under review by the TCEQ QA Manager. Once the QAPP is finalized, HARC will proceed with data operations. In the meantime, HARC is working on the data catalog, which will serve as the foundation and guidebook for the various datasets that will be included in the database. Once the data catalog is finalized, HARC would like to bring forward for review by the subcommittee to get their thoughts and feedback. HARC is also currently working on the structure of the portal interface.
- The Distribution, Fate, and Transport of Emerging Contaminants in Galveston Bay – TAMU: The QAPP has been approved and the kickoff meeting has been held. TAMUG is heading out on Saturday to begin sampling.

Presentation: Movements and Habitat Use Patterns of Coastal Fishes in Galveston Bay Examined Using Acoustic Telemetry – David Wells, Associate Professor, Department of Marine Biology (TAMUG)

Member Spotlight Short Presentations

- Jim Dobberstine, Faculty, Environmental Science and Biology (Lee College)

Open Discussion: Impacts of freeze event on marine life in and around Galveston Bay

- Sea turtle update (Christopher Marshall, Gulf Center for Sea Turtle Research, TAMUG)
 - The Gulf Center for Sea Turtle Research opened a sea turtle

rehabilitation hospital on the TAMUG campus in December 2020. Since then, they have responded to three cold stunning events, two local and one in MA. The first occurred in December 2020, when the center received 10 Kemp's Ridley turtles from the Cape Cod, MA area. These turtles were transported by the TurtlesFlyTwo nonprofit group. The second occurred in early January, during which the center responded locally to 50 green sea turtles. The third was Winter Storm Uri, during which the center, working with TPWD, responded along the Upper Texas Coast (Galveston Bay and Upper Matagorda Bay) to >265 green sea turtles. The weather on the day the storm arrived and on the days that followed disrupted the ability of TPWD and TAMUG to travel on roads and get out into the bay on boats.

- Winter Storm Uri is the largest cold stunning event recorded since 1980. Statewide, 13,500 cold stunned turtles have been reported. There was no north-south trend along the Texas coast; waters got down to freezing in bay waters from north to south.
- Of the 265 green sea turtles responded to along the Upper Texas Coast, 229 perished. 36 were recovered alive and transported to the hospital; 11 are still recovering and 25 of these turtles were released 13 miles offshore in the Gulf of Mexico, where the water is warmer, on February 22, 2021.
- The hospital is currently raising funds for four paid student internships and has an Amazon wishlist for supplies.
- Mangrove update (Anna Armitage, TAMUG)
 - Mangroves in Galveston Bay were hit hard by the freeze event. There are trees that were freeze damaged in 2018 that regrew from the base; this regrowth was damaged during the recent freeze event. There are also trees that maintained their canopy following the 2018 freeze event and continued to grow; these trees were also damaged during the recent freeze. There is no evidence at this time that there is any difference in above-ground survival between trees that were damaged in 2018 and those that were not; everything seems to have been uniformly impacted by the freeze event. It is unknown whether the trees will regrow from the base, how many of the propagules survived, or where the threshold of survival is. TAMUG is working with colleagues along the Texas coast to map mortality and regrowth in relation to the minimum temperatures. There is currently information from Galveston, Port O'Connor, Port Aransas, and further south. The group is seeking information on mangroves near the Texas - Louisiana border. This could be a major coastal ecosystem reset in the area since the mangroves have been hit so hard.
- Fish update (Bryan Eastham, TPWD)
 - Due to the weather, TPWD was not able to get crews out until about

February 19th. TPWD put together at least one team for every bay system from Sabine Lake down to the lower Laguna Madre and used American Fisheries Society guidelines for fish kill assessments. Fish kill assessments were completed every day in every bay system from February 20-27. TPWD is working on a white paper and press release. Along the Texas coast, it is estimated that ~3.8 million fish were killed. 91% of the mortality was non-recreational species (silver perch, hardheads, pinfish, anchovies, and mullet). Of the gamefish that were impacted, 48% were seatrout and 31% were black drum; other gamefish impacted included sheepshead, sandtrout, red drum, gray snapper, and red snapper.

- Sabine Lake and Galveston Bay fared better than mid and lower coast bays.

GBEP, Council, and subcommittee updates:

- WSQ subcommittee meeting: March 10, 2021 1:30PM – 3:30PM
- PPE subcommittee meeting: April 1, 2021 10:00AM – 12:00PM
- B&P subcommittee meeting: April 6, 2021 9:00AM – 11:00AM
- GBC meeting: April 21, 2021 9:30AM – 12:30PM

Announcements/Path Forward Items:

- Next M&R meeting: Wednesday, June 9, 2021, 9:30AM – 11:30AM
- Jean Wright (HGAC) announced that the next Clean Rivers Program Basin Steering Committee meeting will be held June 2nd at 2:00 pm. The information will be posted on the website; let Jean know if you would like to attend and she will make sure you get an invite to the meeting.

Adjourn